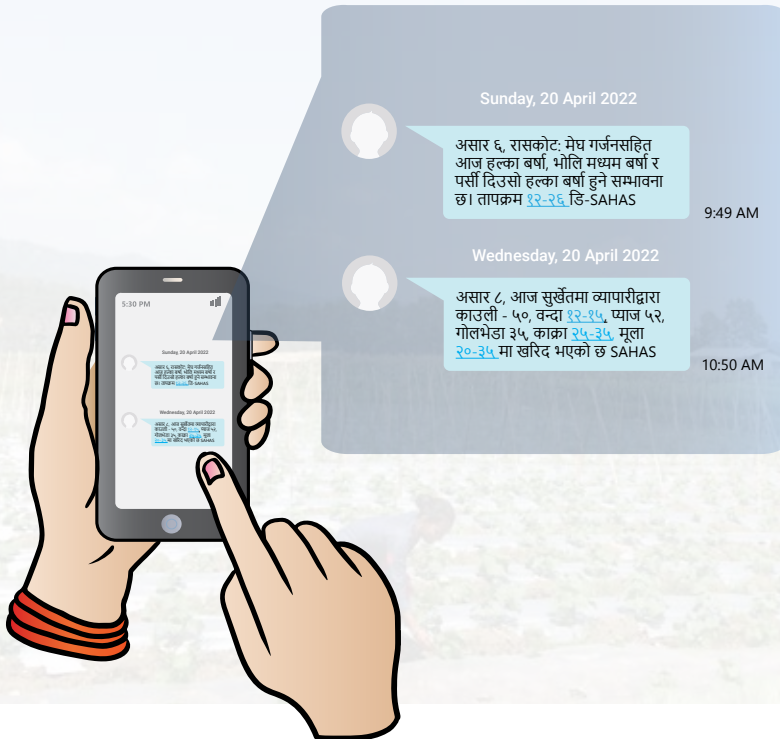


MOBILE SMS BASED AGRI-MARKET INFORMATION AND WEATHER FORECASTING SYSTEM



Weather information is very important to farmers from sowing to harvesting, and information on market prices of their products prior to harvest is even more important. The farmers in the Raskot municipality of Kalikot district have been at a loss as a result of damages to crops at various stages including the harvest due to unpredictable weather events. The crops were mainly damaged by drought, storm, or hailstone, and the harvest used to decay at times. In addition, the loss was amplified by the middlemen as the farmers had no idea of the market prices of their products.

To address this, SAHAS Nepal initiated a mobile SMS-based agri-market information and weather forecasting system in the Raskot Municipality, Kalikot as an effort for risk reduction and preparedness for the impacts of disasters in monsoon and to pre-inform the farmers about the market prices of the vegetables and other agri-products.

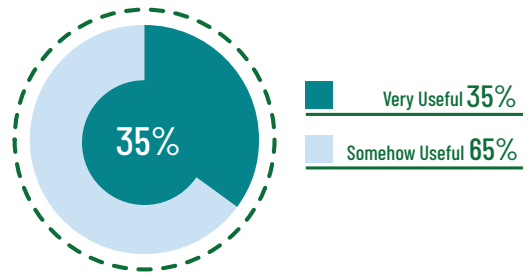
The farmers of Raskot Municipality ward numbers 4 to 9 are getting pre-information once every three days on their mobile phones as SMS. The forecast system basically works via 60 farmers who get SMS on their mobile phones every three days, they pass the information to other farmers in the community of about 500 people which further passes to other 1,442 households of the area in the municipality.

Along with being prepared for the impacts of possible disasters in the monsoon the farmers are also getting to know the market prices of their vegetables and agri-products. The farmers have been able to store and manage their products as per the weather forecast. With this system in operation, the farmers of Raskot are engaged in farming more than ever and their livelihood is improving day by day. Realizing that the system is very useful and effective to the farmers, the sectorial department of the local government, stakeholders, and the farmers are planning to continue it even after the project phases out.

A survey was conducted in 20 farmers' receiving the Agro-Met forecast service in Kalikot for analyzing various aspects of the service including its usefulness, accuracy, and willingness to pay (WTP). The major findings are as follows. In operation, the farmers of Raskot are engaged in farming more than ever and their livelihood is improving day by day. Realizing that the system is very useful and effective to the farmers, the sectorial department of the local government, stakeholders, and the farmers are planning to continue it even after the project phases out.

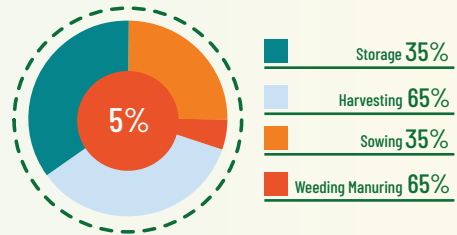
A. Usefulness:

- 35% of the survey participants found the service very useful while the remaining 65% found it somehow useful.
- The uses of the service in various aspects of farming are briefly pointed out below.



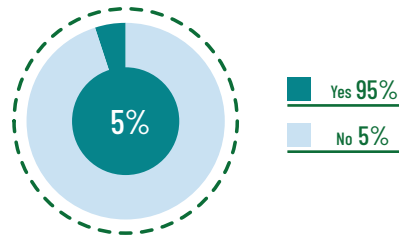
1. During different stages of farming

- 35% of the survey participants each found the service useful during harvesting and storage stages respectively, 25% during sowing and remaining 5% during weeding and manuring stages.



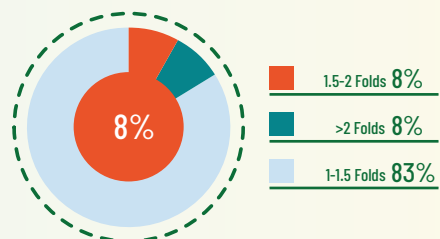
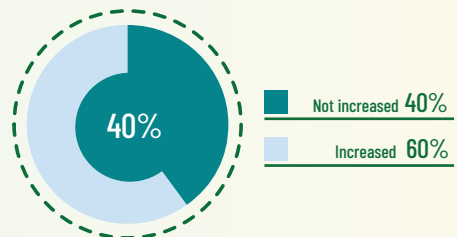
2. In increasing knowledge about on time harvest and proper storage

- As suggested by one of the survey findings, receiving the Agro-Met forecast information has increased the knowledge of 95% of farmers about the need of on-time harvest and proper storage of the yield. Whereas the remaining 5% of farmers' knowledge has not increased.



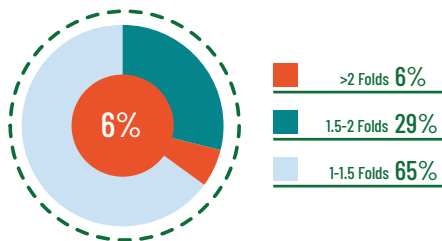
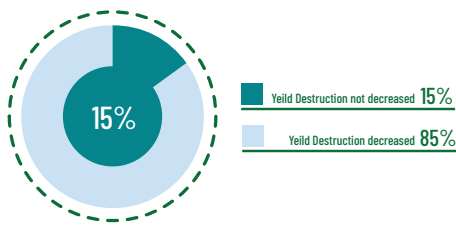
3. In increasing the farm outcomes (e.g. yield)

- 60% survey participants responded that for the farmers who receive the forecast SMS have increased their farm outcomes (for example yield). Whereas remaining 40% don't think so.
- Of those 60% increasing their farm outcomes on receiving the Agro-Met forecast; 83% have found to increase their farm outcomes by 1 to 1.5 folds, 8% by 1.5 to 2 folds and remaining 8% by more than double.



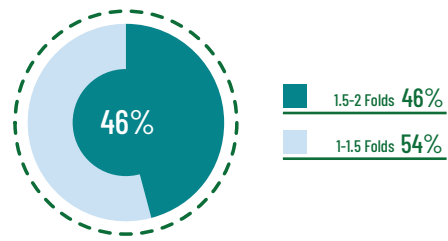
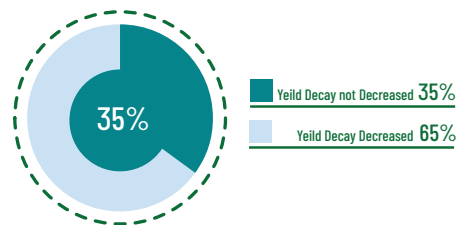
4. In decreasing the yield destruction

- 85% of farmers' yield destruction by extreme weather events (e.g. drought, storm, hailstone, etc.) have been found to be decreased in regards to anticipated protection and customized harvest after receiving the Agro-Met forecast. Whereas this was not found applicable for the remaining 15% of farmers.
- Of those 85% farmers decreasing their yield destruction by extreme weather event from anticipated protection and customized harvest; 65% have found to decrease the yield destruction by 1 to 1.5 folds, 29% by 1.5 to 2 folds and remaining 6% by more than double.



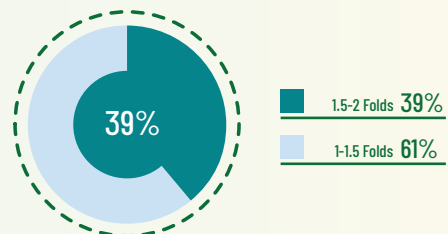
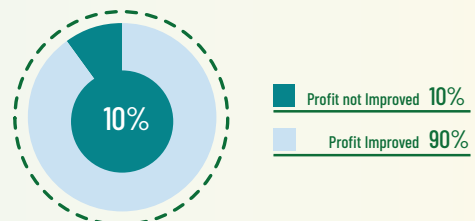
5. In decreasing the yield decay

- 65% of farmers' yield decay (by prolonged storage, unavailable market, etc.) have been found to be decreased in regards to anticipated protection and customized harvest after receiving the Agro-Met forecast. Whereas this was not found applicable for the remaining 35% of farmers.
- Of those 65% decreasing their yield decay by prolonged storage, unavailable market, etc. from anticipated protection and customized harvest; 54% have found to decrease the yield decay in the range of 1 to 1.5 folds and 46% in the range of 1.5 to 2 folds.



6. In improving the profit

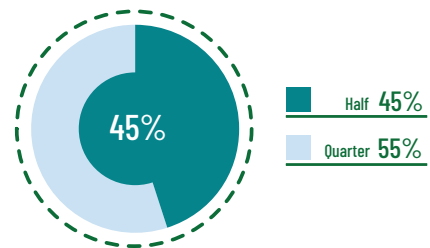
- 90% of the farmers have been found to improve their profits as compared to last year.
- Of those 90% improving their profits; 61% have improved the profit by 1 to 1.5 folds and remaining 39% by 1.5 to 2 folds.





C. Willingness to pay for the service

- All the survey respondents are willing to pay for the service even if the fund from the current project ends.
- 55% of them are willing to pay a quarter of the fee and 45% are willing to pay half of the fee.



D. Suggestions on usefulness and accuracy of the service

- The service would be more useful and effective if telecom would provide this forecast SMS free of cost and to more farmers.

E. Shareable incidents

- Had hard times when radio used to be the only source of information but now it has been easy accessing this very useful information via mobile SMS.

The study findings show that SMS-based agri-market information and weather forecast are useful at different stages of farming, increase knowledge on proper storage and lost harvest, increase farm outcomes, improve profit, and decrease yield destruction and decay. Most of the farmers responded the information system is accurate and they are willing to pay for services. However, the service would be more useful and effective if telecommunication in coordination with the local government and other stakeholders would provide the forecast SMS free of cost and cover more farmers.



For more information

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